Small sized network environment

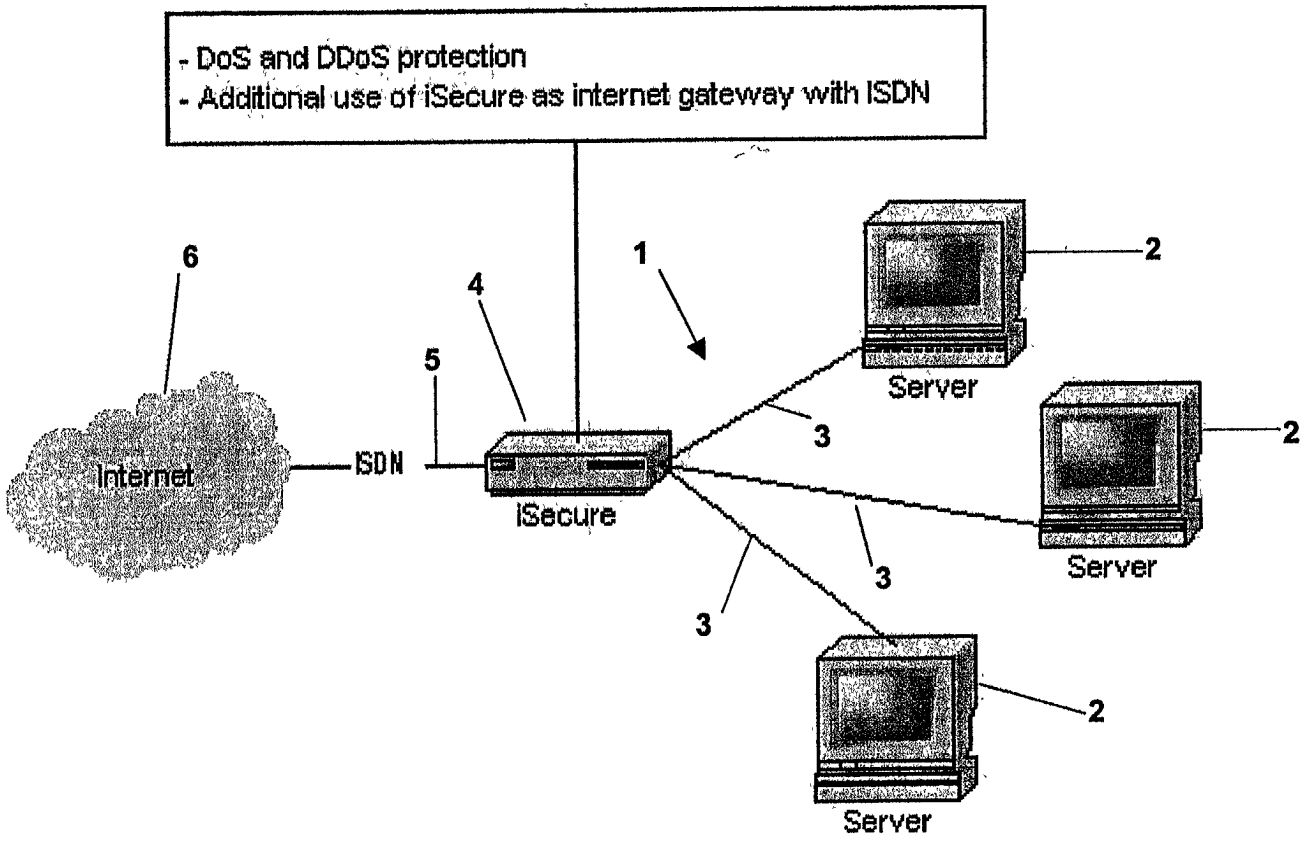


Fig. 1

Medium sized network environment

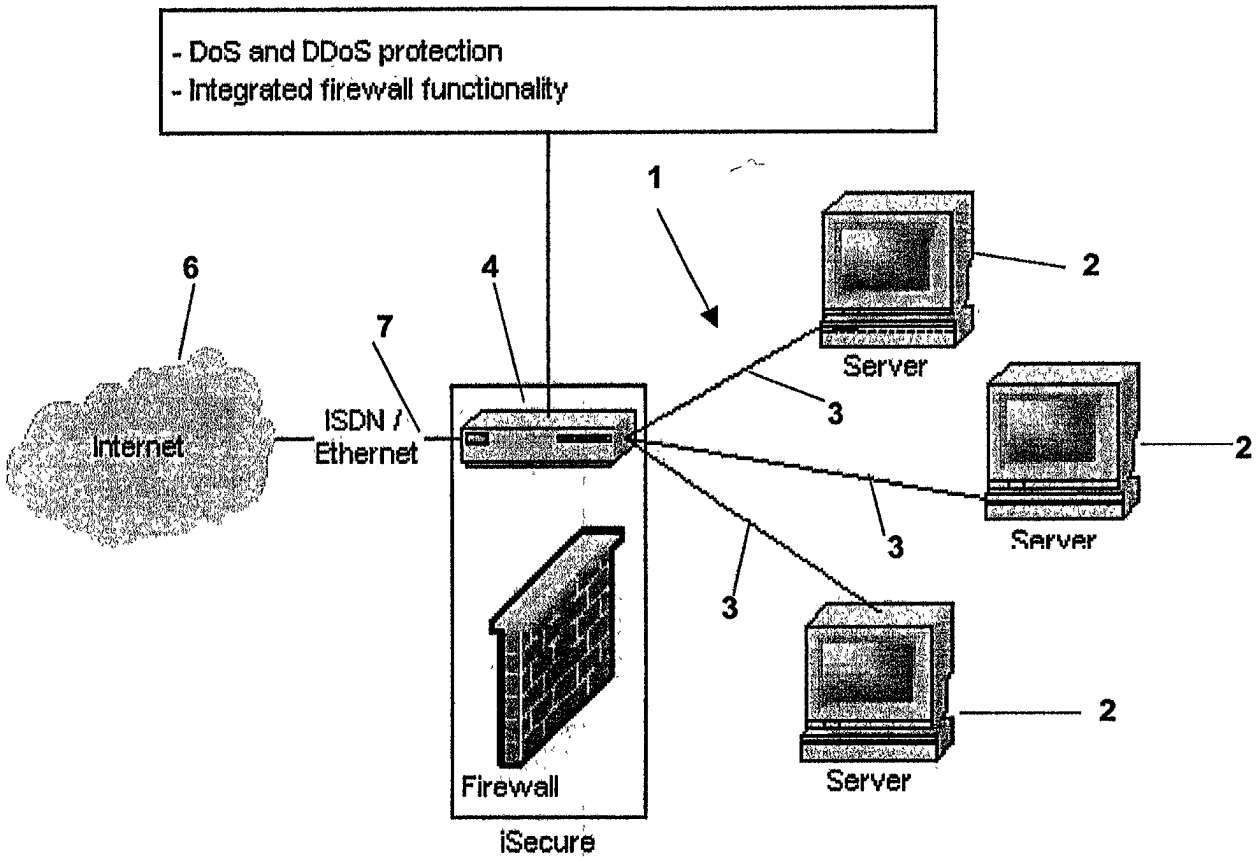


Fig. 2

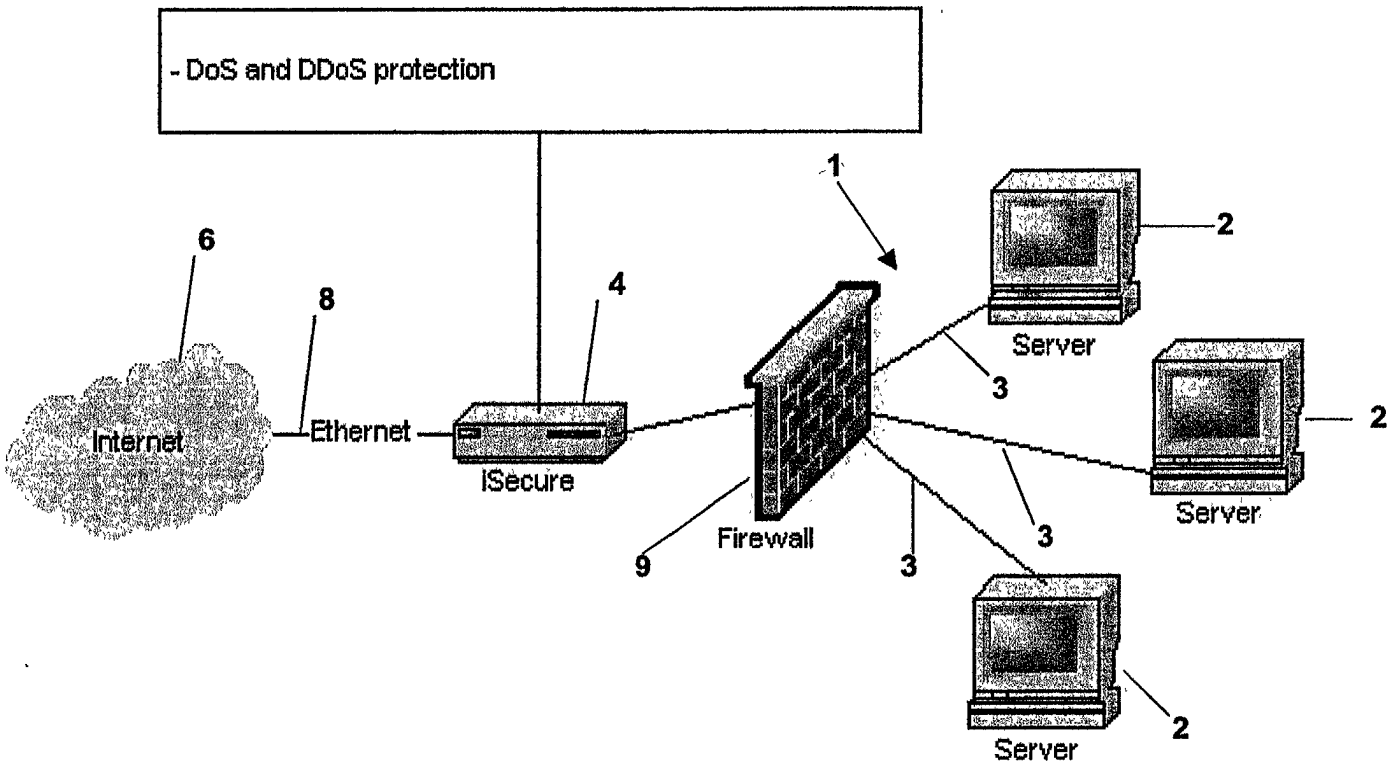

Large sized network environment
- DoS and DDoS protection
1
2
6
8
4
Server
3
2
Internet
Ethernet
ISecure
Firewall
Server
9
3
3
2
Server

Fig. 3

establishing a connection with the authorized / normal use of the protocol

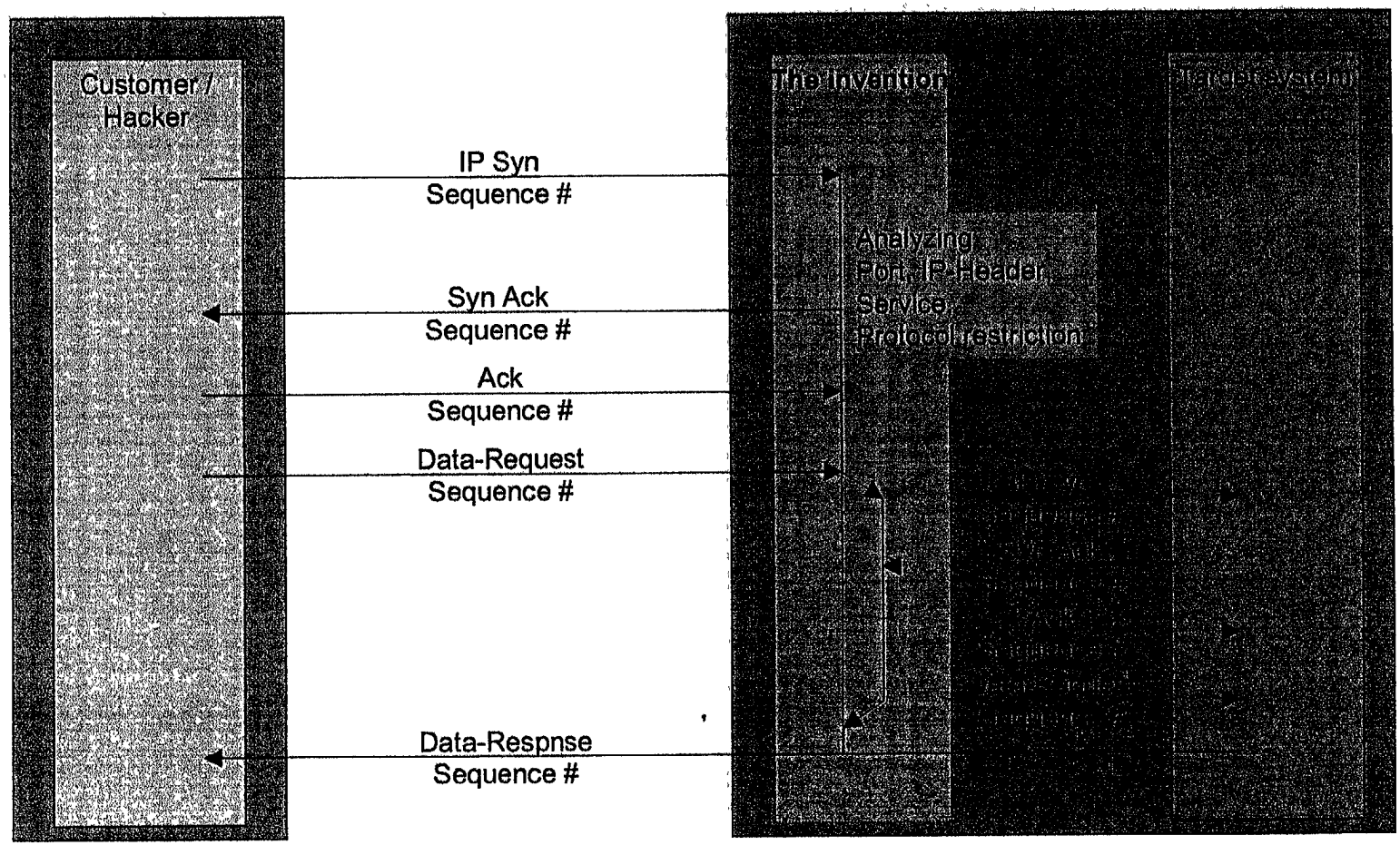


Fig. 4

establishing a connection with the non-authorized / not normal use of the protocol

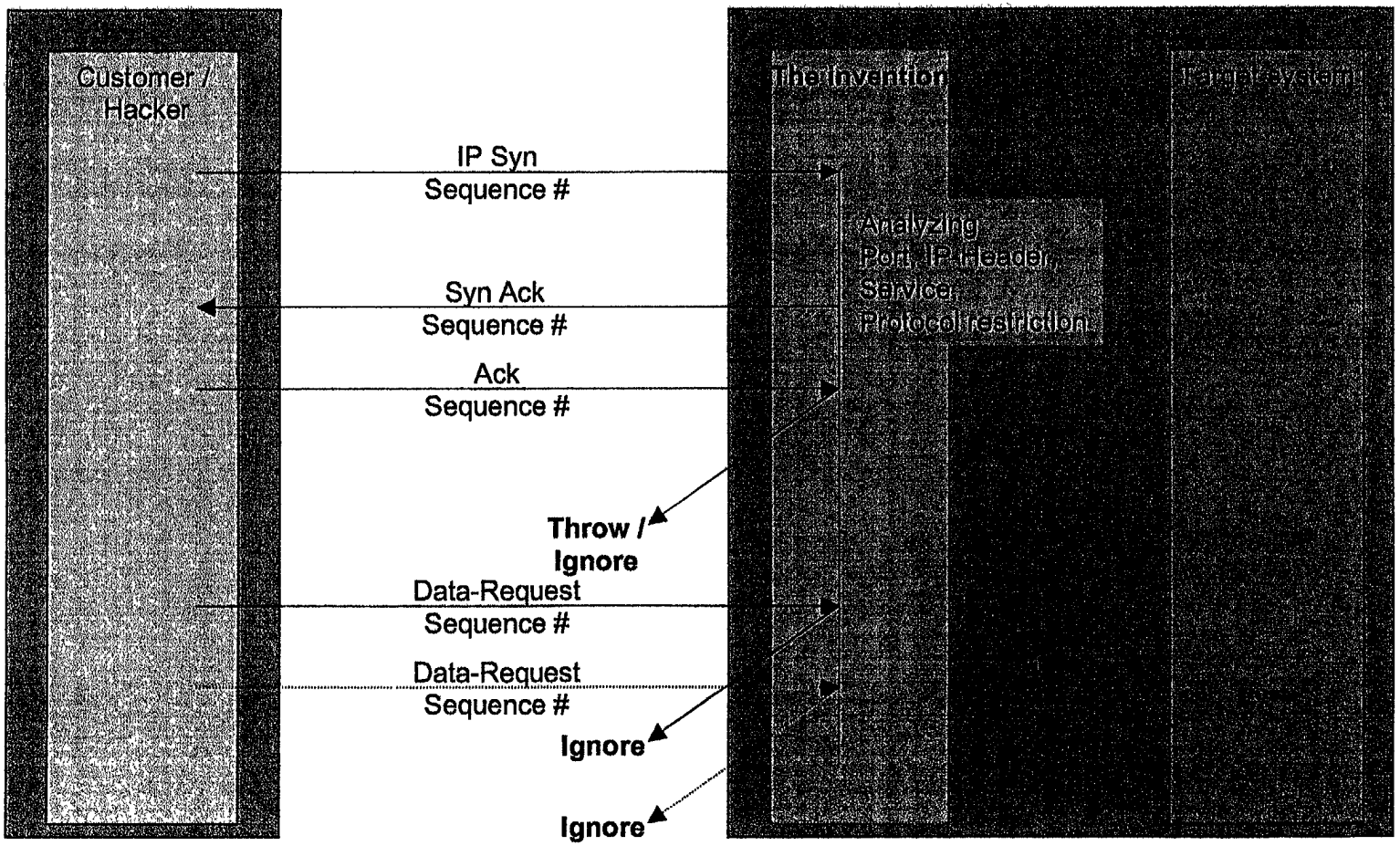


Fig. 5

Failing to establish a connection

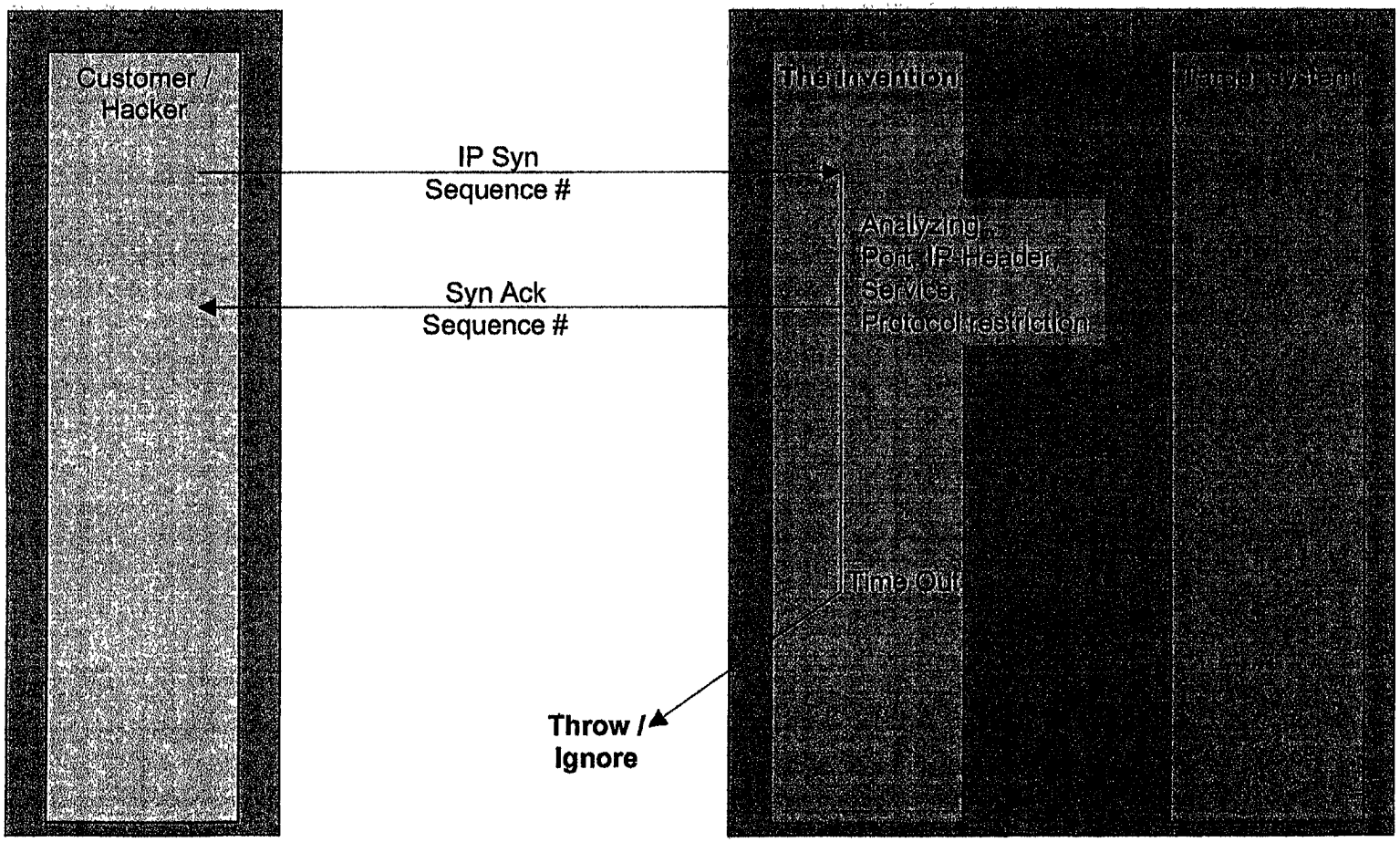


Fig. 6

After establishing a connection with authorized / normal flow of data

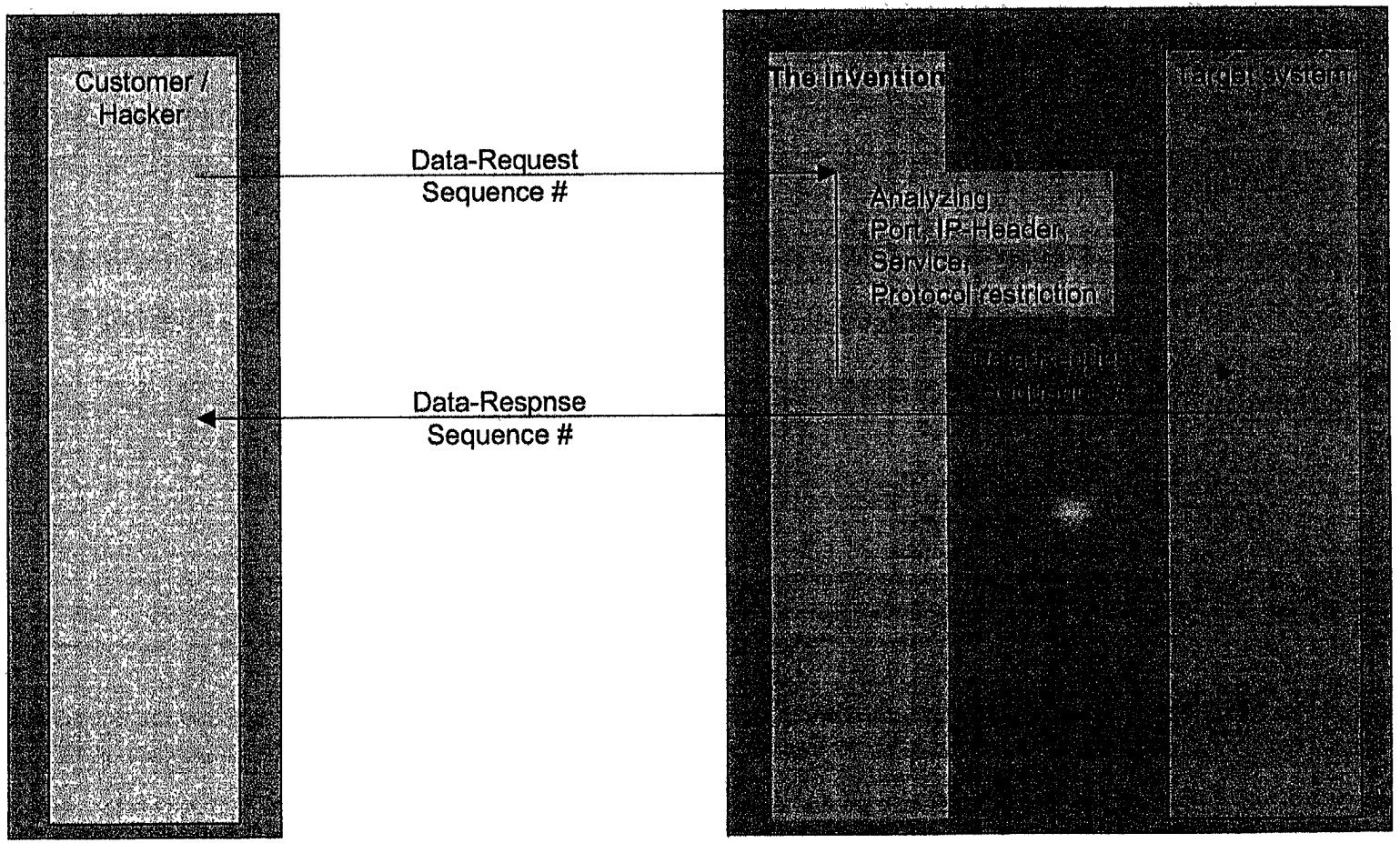


Fig. 7

After establishing a connection with non-authorized / not normal flow of data

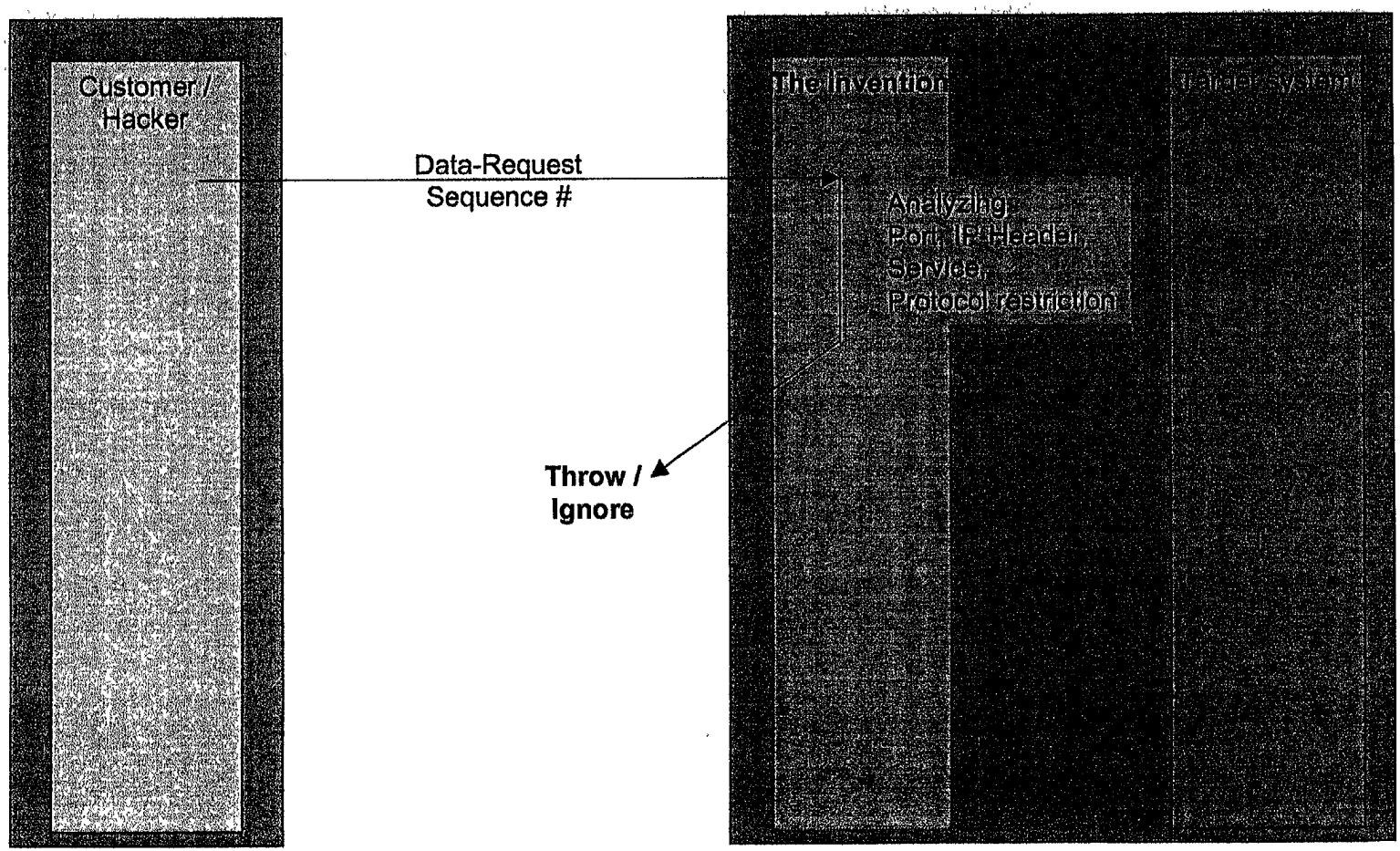


Fig. 8

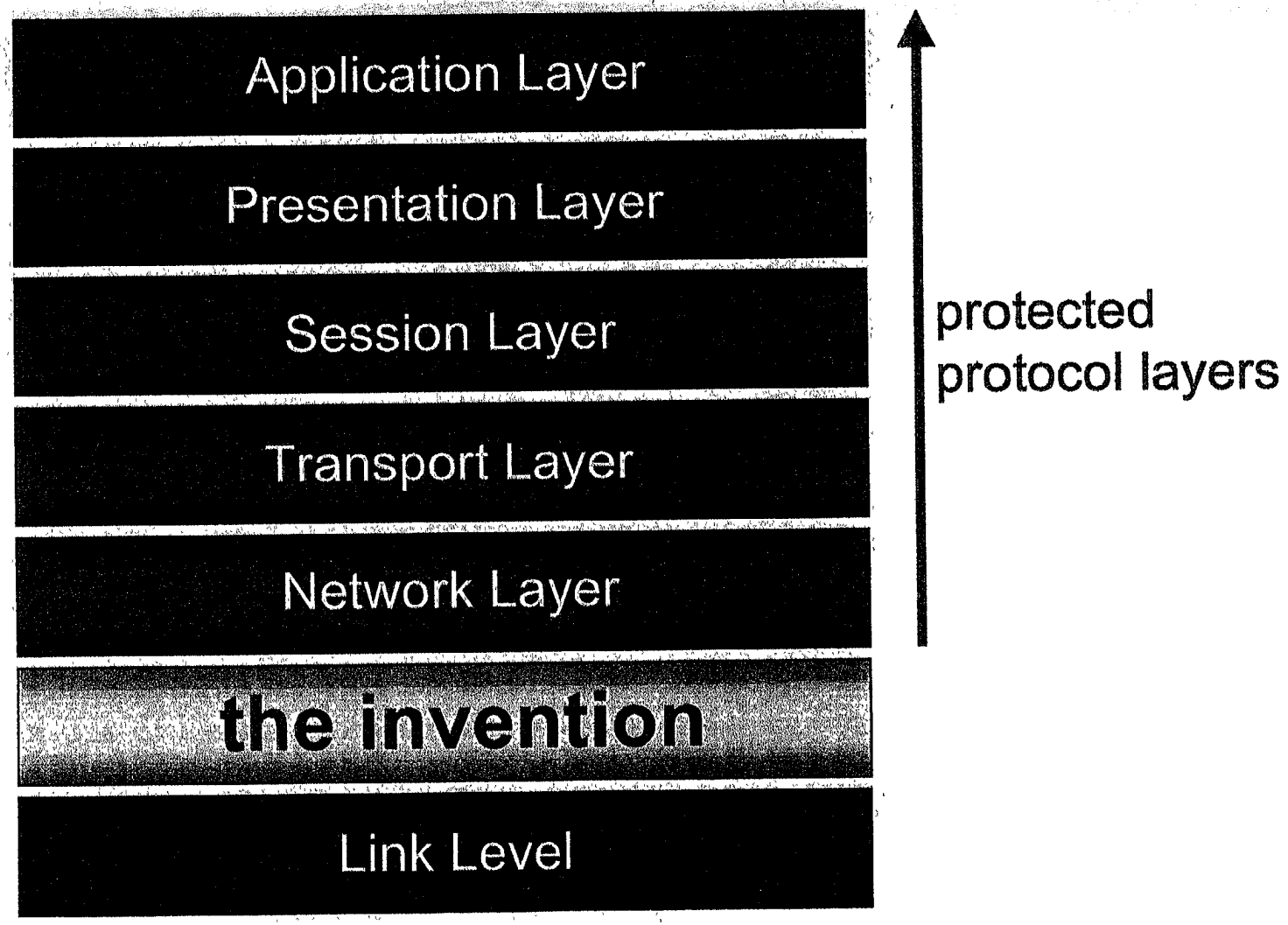
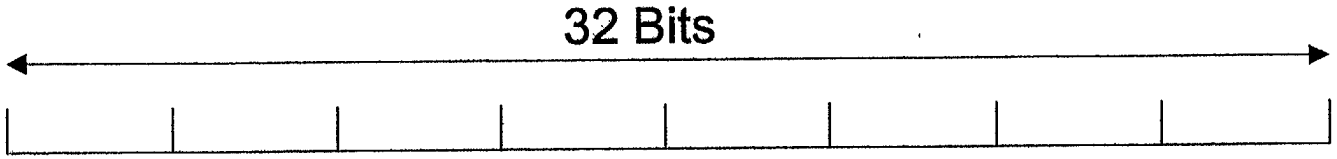

Application Layer
Presentation Layer
Session Layer
Transport Layer
Network Layer
the invention
Link Level
protected
protocol layers

Fig. 9

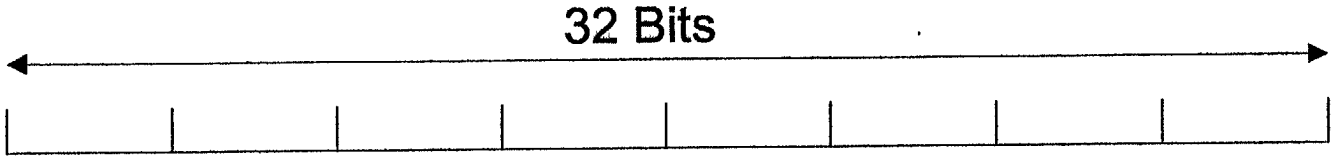
IP-Header



Version	IHL	Type of Service	Total Length
Identification		DF MF	Fragment Offset
Time to Live	Protocol	Header Checksum	
Source Address			
Destionation Address			
Options			Padding

Fig. 10

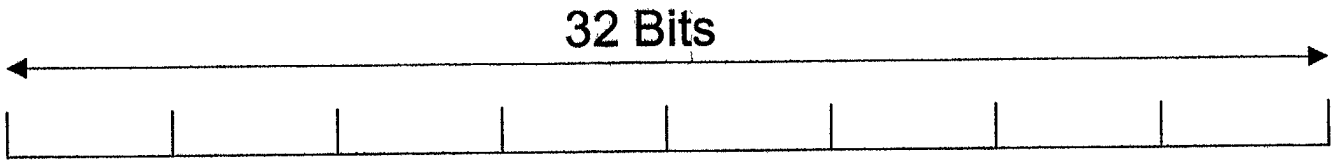
TCP-Header



Source Port			Destination Port
Sequence Number			
Acknowledgement Number			
TCP Header length	Reserviert	control flags	Window Size
Source Port			Urgent Pointer
Options			Padding

Fig. 11

UDP-Header



Source Port	Destination Port
UDP Length	UDP Checksum

Fig. 12

IP-Header	ICMP data part

ICMP Type	ICMP Code	ICMP Checksum
reserved		
IP-Header and 64 bits original datagram		

ICMP Type	ICMP Code	ICMP Checksum
Pointer	reserved	
IP-Header and 64 bits original datagram		

ICMP Type	ICMP Code	ICMP Checksum
Identification	Sequence Number	
ICMP Echo Data		

Fig. 13